What is claimed is:

[Claim 1] A method of transmitting medical diagnostic imaging over low-speed wireless networks to remote locations comprising the steps of: accessing an imaging modality; receiving an image from the imaging modality; establishing a wireless connection with a remote primary server; establishing a security layer over the remote connection; compressing the image; encrypting the compressed image; establishing an incremental file transfer of the compressed image over the security layer to the primary server; transmitting the compressed image to the primary server; decrypting the compressed image; decompressing the image; substantially losslessly storing the image on a storage device local to the primary server; accepting authenticated remote inbound requests for viewing the image; and sending the image to an authenticated requestor.

[Claim 2] The method of claim 1 wherein the at least one image received from the imaging modality is formatted to a DICOM specification.

[Claim 3] The method of claim 1 wherein the connection with the remote primary server is through TCP/IP.

[Claim 4] The method of claim 1 wherein protocol for the incremental file transfer is an RSYNC-based protocol.

[Claim 5] The method of claim 1 further comprising the step of archiving the at least one image to an optical storage medium for long term storage.

[Claim 6] A method of transmitting medical diagnostic imaging wirelessly to remote locations comprising the steps of: providing a client computer; providing a DICOM receiver module communicatively coupled to the client computer, the DICOM receiver adapted to accept DICOM images and patient information from imaging modalities for manipulation and filming; providing a RSYNC module communicatively coupled to the client computer; providing a GZIR compression module adapted to compress data transmitted by the RSYNC module; providing a secure socket layer module communicatively coupled to the RSYNC module, the secure socket layer module adapted to encrypt data transmitted by the RSYNC module; providing a wireless network interface communicatively coupled to the client computer; providing a primary server; receiving the encrypted transmission on the primary server, decrypting the transmission, and storing the DICOM images.

[Claim 7] A method of transmitting medical diagnostic imaging to remote locations comprising the steps of: receiving a DICOM data file on a client; parsing the DICOM data file for a data header, image descriptor, sync value and image data; establishing a secure connection between the client and a remote server; verifying an absence of a

duplicate DICOM data file on the remote server; transmitting the DICOM data file from the client to the remote server responsive to the absence of a duplicate DICOM data file on the remote server.